

Gravicol Bonding Pastes

The Gravicol range of bonding pastes are designed for the assembly and bonding of glass reinforced plastic mouldings. All of the bonding pastes in the range are pre-accelerated and require only the addition of a standard MEKP catalyst. The pastes can be used for bonding two parts, insert panels, core materials. They can also be used for cavity filling and as an aid to lamination to help reduce the chance of air voids.

Bonding Core Materials

Core materials can be bonded onto composite skins to add strength and insulation to parts whilst retaining lower overall weights; these materials are usually a foam or balsa material. The types of paste used for this application are usually without fibres; the pastes must have low exotherm temperatures and a low level of shrinkage to ensure that no surface distortion is caused.

Gravicol 2039 and 2040 would be most suitable for this type of application. For this job the paste is usually applied with a comb or notched spatula, and obviously the gel time required depends on the size of the job at hand.

Gap Filling

The Gravicol pastes can be used as a gap filler and sealant for certain applications. Hard to laminate and intricate areas can have the paste applied into them before being laminated over or having inserts or core materials placed over them. Pastes used for these purposes must have low exotherm and shrinkage properties to avoid causing distortions in the surface of the laminates. Also the mechanical properties of the paste must be considered to ensure that the paste can cope with the types of stresses associated with the bond.

Gravicol 2039 or 2427 would be suitable for this type of application as their flexibility makes them resilient to stresses and impacts. The Gravicol 2427 is formulated with glass fibres in it and is therefore more suitable for heavy gap filling applications as the glass adds extra strength to the bond itself.

Laminating Aid

The paste can be used to fill small lips, edges and detail on parts that are difficult to laminate. The part can then be laminated in the normal way either whilst the paste is still wet or once it has cured. The paste can also be applied in a thin film behind the gel coat in curves and radii, the fibre glass can then be pushed into the paste, the paste then holds the glass in place reducing the chances of air voids and bubbles within the laminate.

Gravicol 2039 and 2427 both have low levels of shrinkage and low peak exotherm temperatures and are ideal for these applications.

· The materials are usually applied in a thin layer, by brush using 1% MEKP.

Range of Gravicol Products sold by Cray Valley UK (Stallingborough)

Bonding paste without glass fibres
(for use in thinner joints/non structural)

Gravicol 2039

A flexible and smooth paste with a low level of shrinkage. It can be used for bonding, fixing inserts and also as an aid to laminating.

The material is blue/white and cures off white.

Available versions:

Gravicol 2039 TC has a 14-22-minute gel time *

Gravicol 2039 IHB TC has a 40-50-minute gel time *

Gravicol 2039 FC TC has a 10-minute gel time *

Gravicol 2039 IHB BV TC has a 55-60-minute gel time*
(white in colour) (lower visc Vetrotex version)
Gravicol 2039 STD White has a 14-22-minute gel time
(white in colour)
Gravicol 2039 IHB White has a 40-50-minute gel time
(white in colour)

Gravicol 2040
A semi-flexible smooth paste with a low level of shrinkage. This paste has a longer gel time so it can be used for larger jobs such as fixing core materials or balsa.
The material is dark blue and cures grey.

Available versions:
Gravicol 2040 TC has a 60-90 minute gel time*.
Gravicol 2040 IHB TC has a 135-195 minute gel time*.
Gravicol 2040 STD White has a 60-90 minute gel time.
(White in colour)

Gravicol D07
A semi-flexible low-density paste with very low shrinkage. The material can be applied with a spatula, and is used for composites where final part weight is a consideration. The material has a crisp white colour and cures with a density of 0.7.

Available versions:
Gravicol D07 has a 13-21 minute gel time
Gravicol D07 IHC has a 50-70 minute gel time

Gravicol D09
A semi-flexible low-density paste with very low shrinkage. The material can be applied with a spatula and is used for composites where final part weight is a consideration. The material is grey and cures beige with a density of 0.9.

Available versions:
Gravicol D09 has a 9-15 minute gel time
Gravicol D09 IHB has a 45-65 minute gel time

Bonding paste with glass fibres
(for use in larger joints/gap filling)

Gravicol 2427
A semi-flexible paste with glass fibres and a very low level of shrinkage. Excellent for gap filling. The material is dark blue and cures grey.

Available versions:
Gravicol 2427 TC has a 15-23 minute gel time*
Gravicol 2427 IHB TC has a 45-65 minute gel time*

Gravicol 2428
A flexible paste with glass fibres and a very low level of shrinkage. Adapted for gap filling and bonding applications where thicker application is needed. The material is dark blue and cures grey.

Available versions:
Gravicol 2427 TC has a 15-23 minute gel time*
Gravicol 2427 IHB TC has a 50-65 minute gel time*

* Gel times determined using 1000g @ 23°C + 1% MEKP